! Zika Virus Infection (Imported, Non-Pregnant Cases)

Version 3.1 (March 18, 2016)

Merlin reporting code = 06010
Case report form (CRF): *Florida Confidential Vector-borne Disease Infection CRF*
MERLIN EXTENDED DATA REQUIRED

Background

Zika virus (ZIKV) is transmitted via mosquitoes. Most infections are asymptomatic; about 1 in 5 people infected with ZIKV become ill. The most common symptoms are fever, rash, joint pain, and conjunctivitis. The possibility of a link between ZIKV infection and Guillain-Barré syndrome is under investigation.

Clinical criteria for diagnosis

- An illness characterized by two or more of the following symptoms: fever (measured or reported), rash, arthralgia, or conjunctivitis

OR

- Guillain-Barré syndrome meeting Brighton Collaboration level 1, 2, or 3.

Laboratory criteria for diagnosis

Confirmatory:

- Detection of viral RNA by reverse transcriptase polymerase chain reaction (PCR) in at least **one specimen**: serum, cerebrospinal fluid (CSF), or other specimen (e.g., amniotic fluid, urine, semen, saliva);

OR

- Detection of viral antigen by immunohistochemistry (IHC) in tissue;

OR

- Detection of ZIKV IgM antibodies by enzyme immunosorbent assay (EIA) or immunofluorescent assay (IFA) in serum or CSF **and** ≥4-fold difference in neutralizing antibody titers by plaque reduction neutralization test (PRNT) between ZIKV and dengue virus (DENV) or other flaviviruses endemic to the region where exposure occurred;

OR

- Seroconversion from negative for ZIKV IgM antibodies in acute phase specimen to positive for ZIKV IgM antibodies in a convalescent-phase specimen by EIA or IFA in serum or CSF **and** negative for DENV IgM antibodies.

Presumptive:

- Detection of ZIKV IgM antibodies by EIA or IFA in serum or CSF,

AND

- Negative or equivocal for DENV IgM antibodies,

AND

- <4-fold difference in neutralizing antibody titers by PRNT between ZIKV and DENV or other flaviviruses endemic to the region where exposure occurred or no PRNT for neutralizing antibodies.

Supportive:

- Detection of ZIKV IgM antibodies by EIA or IFA in serum or CSF,

AND

- Positive for DENV IgM antibodies,

AND

- <4-fold difference in neutralizing antibody titers by PRNT between ZIKV and DENV or other flaviviruses endemic to the region where exposure occurred or no PRNT for neutralizing antibodies.

Epidemiological criteria for diagnosis

Recent travel to a country or region with ZIKV transmission.

Epidemiological link to a confirmed or probable case (e.g., sexual contact, blood transfusion, organ transplantation, similar local geographical location of residence [mosquito transmission]) and common differential diagnoses ruled out.

Case classification

Confirmed:
A clinically compatible illness in a person with confirmatory laboratory evidence and recent travel to a country or region with ZIKV transmission.

Probable:
A clinically compatible illness in a person with presumptive laboratory evidence and recent travel to a country or region with ZIKV transmission.

Suspect:

- A person that does not meet clinical criteria but has confirmatory, presumptive, or supportive laboratory evidence and recent travel to a country or region with ZIKV transmission,

OR

- A clinically compatible illness in a person with supportive laboratory evidence and recent travel to a country or region with ZIKV transmission,

OR

- A clinically compatible illness in a person with recent travel to a country or region with ZIKV transmission who is epidemiologically-linked to a confirmed or probable case.

Comments

Only about 1 in 5 people infected with Zika virus are symptomatic and some patients may not have fever. Zika fever, dengue fever, and chikungunya fever are difficult to differentiate clinically. It is also important to note that co-infections with these viruses can occur.

Cross-reaction with related flaviviruses (e.g., dengue, West Nile, yellow fever, Japanese encephalitis viruses) on serological tests is common and results may be difficult to interpret. Due to this cross-reactivity, it is important to ask if there has been any lifetime travel to a flavivirus-endemic country or vaccination for yellow fever or Japanese encephalitis viruses.

Clinicians should also consider testing for dengue and chikungunya fever for suspect cases of Zika fever if fever was reported. As testing capacity allows, all samples meeting the requirements for Zika fever PCR testing at the Bureau of Public Health Laboratories (BPHL) will also be tested for dengue and chikungunya viruses if the patient reported fever. All samples collected in the first four days of illness and meeting standard requirements for dengue and chikungunya testing will also be tested for Zika virus by PCR if travel to a Zika fever endemic area is reported.

Acute samples from people with infections believed to be acquired outside Florida should be sent to BPHL.